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ABSTRACT

A study was conducted to assess the economic impact of Montgomery College (MC) on local business, local government, and the job market in the surrounding community for fiscal year 1981. Using linear cash-flow equations designed for the American Council on Education and adapted for MC, the study assessed monies coming into the college from students and from federal, state, and county sources and traced the flow of money into local business and government sectors. Study results indicated that: (1) the total impact on local businesses made by MC and its employees was nearly \$12 million, including \$8.9 million in direct expenditures and \$3.1 million resulting from the multiplier effect; (2) 37 cents of every dollar spent by the college for operations and compensation entered the business sector for goods and services; (3) for every county tax dollar appropriated, \$1.07 was returned to the business sector; (4) for every \$0.99 spent by the county to provide services for college employees and their families, \$1.00 was received by the county through taxes or revenue transfers; (5) for every \$0.72 spent by the county to support MC and provide college-related services, MC returned \$1.00 in college-related revenues to the county; and (6) the college employed 980 people full-time, and an additional 340 people were employed to support college employees and their families.
 (HB)

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MONTGOMERY COLLEGE
ECONOMIC IMPACT STUDY
FY 1981

MONTGOMERY COLLEGE
OFFICE OF INSTITUTIONAL RESEARCH
MONTGOMERY COUNTY, MARYLAND
JUNE 1982

VC 820 548

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EXECUTIVE SUMMARY

Montgomery College is a public, multi-campus, comprehensive community college established and supported by Montgomery County and the State of Maryland for the primary purpose of providing appropriate and essential education and training at the postsecondary level. The College enrolls nearly 19,000 students in credit courses and over 3,000 students in non-credit courses each semester. The College's basic purpose is to provide education of excellent quality to primarily the residents of Montgomery County.

The College, through its primary purpose of education, affects the local economy by providing an educated labor force to meet County employment needs. However, it is not often recognized that the College affects the local economy in Montgomery County in other ways through its daily operations as a multi-million dollar enterprise. In order to determine the magnitude of the effect of its daily operations on the economy, a study has been done to measure the impacts of the College's operating expenditures for the 1981 fiscal year on local business, local government, and the local job market. No attempt was made to show what the economy would have been like if the College did not exist or if College property had been put to an alternative use. The results simply describe the expenditures and related governmental revenues and costs for Montgomery College for a one-year period.

This study is the first of several studies about the impact of the College on its community. Studies being planned include ones on community use of facilities, the economic return to students for their investment in higher education at Montgomery College, and community involvement of the College and its staff.

Business Sector

The total impact on local business of expenditures made by Montgomery College and its employees was nearly \$12 million. This figure includes \$8.9 million of local expenditures made by the College and its employees another \$3.1 million of spending resulting from the multiplier effect.

In addition to expenditures, the value of local business property that existed in order to serve the College and College-related business transactions was estimated to be more than \$6 million. The credit base of local banking institutions was increased about \$7.1 million as a result of College and employee deposits. However, more than \$1 million of potential business volume was removed from the business sector because of the College's operation of auxiliary enterprises, such as bookstores and food services.

The \$8.9 million estimate of College and employee expenditures does not include an estimate for employee expenditures for the purchase of homes. It only includes an estimate for rent expenditures because the economic impact of purchasing homes is very difficult to estimate. If the impact for people purchasing homes was similar to that for renters, the amount of expenditures for the College and its employees would increase to \$11.1 million from \$8.9 million. The total impact on local business would increase from approximately \$12 million to nearly \$15 million.

Thirty-seven cents of every dollar spent by the College for operations and compensation entered the County's business sector for goods and services. In addition, for every County tax dollar the County appropriated for the College \$1.07 was returned to the business sector.

Government Sector

Montgomery County received approximately \$1.3 million from College-related taxes and transfers. This includes taxes paid by employees and the College and State and Federal aid transfers allocable to employees and their families. It does not include \$10.6 million of State aid for the College or \$5.4 million in State and federal student financial aid. The major costs to Montgomery County in addition to the \$11.2 million appropriation for the College were about \$1.3 million to provide municipal and school services to College employees and their families and \$170,000 in foregone real estate taxes for College property.

For every 99 cents spent by the County to provide municipal-type services and public schools for College employees and their families, \$1 was received by the County as taxes or revenue transfers. The ratio of County costs for providing College-related services and for supporting Montgomery College to non-County revenues generated by the College including State and Federal aid to students and the College results in a ratio of .72 to 1. Thus, for every 72 cents the County spends for providing College-related services and for supporting Montgomery College, the College returns one dollar in College related revenues to the County.

Job Sector

The greatest impact the College had on private individuals in the County was primarily through jobs and employment opportunities. The College employed directly over 980 people full-time in FY'81 as administrators, faculty, or support staff in its regular operations plus the Community Services and auxiliary enterprises activities. Over 340 additional people were employed by local businesses and the County government to support these employees and their families. The College also employed over 470 people on a part-time basis in FY 1981. An estimate of the number of additional people employed by local businesses and the County government to support these part-time College employees was not made in the study because it can not be assumed that part-time employees reside in the County because of their College employment.

Future Impacts

Based on the College's budgets for fiscal years 1982 and 1983 and the assumptions used in the FY 1981 analysis, the College's impact on the economy should increase an estimated 13.9 percent from FY 1981 to FY 1983. Total taxes and revenues transfers would increase an estimated 16.1 percent, assuming an annual five percent increase in County budget, tax, and assessment data, from FY 1981 to FY 1983.

Conclusion

The College, operating as one of the County's major enterprises, has had a positive impact on all sectors of the local economy. These positive impacts coupled with the College's influence on raising the educational and skill levels of local population make Montgomery College a vital local economic force.

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INTRODUCTION

Before a major new business is established in an area, the costs and benefits of locating the business in a particular location are analyzed long before a facility is built or employees are hired. A business needs to know the costs of operating in a certain locale, and if by demonstrating the positive economic impacts it would bring to an area, it could receive a significant tax break. The local government, on the other hand, also needs to be aware of the positive impacts as it courts different businesses. In addition, a county or city must be aware of the costs of providing services to a company and its employees.

Unfortunately, this same concern and awareness of costs and benefits is often not found when dealing with governmental or other non-profit enterprises. This often is due to the slow, incremental growth of many governmental agencies. The final result, however, is limited knowledge of the local impact of multi-million dollar operations on the local economy. Funding cutbacks or increases affect not only the governmental operations themselves, but also the communities in which they are located. Institutions and their staffs have an impact on local business and local tax revenue. They also may require additional services and products from both the business and government sectors.

This study attempts to trace the impact that Montgomery College had on Montgomery County government and business during one fiscal year, July 1, 1980 to June 30, 1981. It describes the impact on local business from expenditures made by the College and its employees that live within and outside the County. The study also estimates the amount of increased taxes the County receives as a result of the College as well as the costs of supplying services to College employees and of removing property from the tax rolls.

The study does not attempt to show what the economy would be like, if the College did not exist, or if its property were put to an alternative use. The results simply trace the expenditures and related governmental revenues and costs for a one-year period.

Methodology

The operation of Montgomery College will have long lasting effects on the County's economy through the increased earnings of its students and the manpower training provided to local business and industry. This study, however, measured only the short-term impacts of the College's operations for one year. The study design looks at monies coming into the College from students, federal, State and County sources, and traces the flow of this money into the local business and government sectors. The results also reflect monies the County must spend to provide services to the College's resident employees. In order to trace these funds, a series of linear cash-flow equations originally designed for the American Council on Education [2] were used. The equations do not take into account the tempo of economic activity or stability. They also are conservative in that the impacts are probably greater than the results indicate as shown in sections of the report that follow.

In adapting the equations for Montgomery College, impacts of student spending in the County were omitted. It would be difficult to determine how many students lived in Montgomery County because they attended the College. If the College did not exist, many probably still would have lived in the County. However, the spending of all full-time employees was considered, even though some employees may have lived in the County if the College did not exist. The rate of spending of full-time out-of-County employees has been adjusted to reflect their local spending pattern. The impact of part-time employees was not included in the study for reasons similar to those for students.

The results are only estimates of the College's economic impact on the County in FY 1981. The study was designed to use information that was readily available to avoid creating new surveys and more paperwork. Statistics from national and statewide studies were used, for example, to estimate spending and saving patterns of employee groups. Those figures sometimes were adjusted to reflect residential patterns in Montgomery County and the fluctuating state of the economy. Some researchers feel that the use of nationally normed data in sensitive areas such as spending is more accurate than creating new data from a smaller base. Exact figures were available for College expenditures, employee information, and County and State financial and property assessment data. Information about the business sector came from County records and the U.S. Census of Business and Industry.

Summary of Results

The results are divided into two major sections to describe the impact of Montgomery College on the 1) Business Sector, and 2) Government Sector. A short section on Job Sector impacts also is included. All figures are for the 1981 fiscal year unless otherwise noted.

Business Sector

The total impact of expenditures on the Montgomery County business sector by Montgomery College and its employees was approximately \$12 million. This figure includes \$8.9 million of local expenditures made by the College and its employees and \$3.1 million of additional spending resulting from the multiplier effect (Table A). The multiplier effect traces dollars through the first round of spending to the second, third and higher rounds. For example, 60 cents of a dollar spent by a faculty member at a local restaurant may go to a restaurant employee who then spends part of that sum at another local establishment. The multiplier effect takes into account each round of spending within a specified area. This study used a moderate multiplier of 1.35 which reflects the size of the area, the number and volume of businesses, and the diversity of the industrial base [13].

TABLE A
Local Impact of Expenditures Made by Montgomery College
and its Employees

Local expenditures by the College	\$ 1,490,835
Local expenditures by employees	7,374,515
Total local expenditures	\$ 8,865,350
Multiplier effect	x 1.35
Total Impact	\$ 11,968,223

College Expenditures

The amount of local expenditures made by the College itself (\$1,490,835), was calculated by multiplying the percentage of purchases made at local firms times the total College expenditures for FY 1981 less compensation, payments to governments, etc. These purchases include goods and services needed to maintain the College's operation.

Employee Expenditures

Local expenditures by Montgomery College employees of \$7,374,515 come from three sources: 1) expenditures for local rental housing, \$989,912; 2) non-housing expenditures, \$6,225,681 and 3) expenditures by nonresident employees, \$158,922 (Table B). The first two categories included only employees living in Montgomery County. Seventy-three percent of the full-time employees lived in the County in FY 1981. The number of resident employees renting housing (31 percent) was based on the U.S. Census of Housing [10] while the percent of disposable income used for rent (26 percent) was based on U.S. Bureau of Labor Statistics profiles of families living in the Washington region.

Montgomery College employees who owned homes in the County were estimated to have spent at least an additional \$2,244,000 for housing. The \$2.244 million figure is based on the same estimates used in determining the rental expenditure of employees. This money was not included in the overall computations because of the difficulty of estimating how much of it increased the local business volume or expanded the credit base. The amount of disposable income spent by resident employees for payment to banks of mortgage interest and principal charges, to insurance companies, and realty firms, is probably more than \$2.244 million. It also can be assumed that a portion of these payments did increase the local business volume. The exclusion of these expenditures from the analysis of the College's impact on the business sector, including area financial institutions, illustrates the understatement of the total College impact inherent in the conservative approach to this study. If we were able to include this \$2.244 million, local expenditures by College employees would increase to \$9,618,515 from \$7,374,515 (Table B). The impact on the local economy of these increased expenditures plus the impact of the College's expenditure would increase to nearly \$15 million from \$12 million.

TABLE B
Local Expenditures by Montgomery College Employees

Local rental housing expenditures	\$ 989,912
Non-housing expenditures	6,225,681
Nonresident employee expenditures	158,922
Sub-Total	<u>\$ 7,374,515</u>
Non-rental housing	<u>2,244,000</u>
Total	\$ 9,618,515

The \$6.2 million spent on non-housing goods and services included all local expenditures made by resident employees. The percentage of disposable income spent for non-housing goods and services (66%) also came from the U.S. Bureau of Labor Statistics profiles. The proportion of non-housing expenditures that employees spent within the county (75.6%) was determined by the gravity theory that takes into account local business volume and the proximity and volume of neighboring business establishments.

The amount of nonresident employee expenditures (\$600 per employee) made in Montgomery County was based on an estimate of annual purchases of goods and services made by employees living in other political jurisdictions.

College-Related Business Property

The direct expenditures by Montgomery College and its employees do not capture the College's full impact on local businesses and the economic base of the County. In addition to expenditures, the value of local business property that existed in order to serve the College and College-related business transactions should be considered. The value of that property in FY 1981, including both real estate and inventories was over \$6.0 million (Table C).

The value of College-related real property (\$4,664,216) was calculated by multiplying the percentage of total County business volume that was College-related times the value of all local business real property. [6] The value of inventories (\$1,346,425) was determined by multiplying an inventory-to-business volume ratio (11.25%) from the U.S. Internal Revenue Service [12] times the value of College-related business volume.

TABLE C
Value of College-Related Local Business Property

Value of real property	\$ 4,664,216
Value of inventories	<u>1,346,425</u>
Total	\$ 6,010,641

Credit Base

Both personal and business incomes related to College activity had an additional impact on the local economy through the expansion of the credit base in local banks. The credit base was increased by approximately \$7.1 million as a direct consequence of College-related deposits in FY 1981 (Table D). A large percentage of this expansion came from the checking and savings accounts of College employees. Estimates of the average size of these accounts were based on a weighted average of income levels of faculty, staff, and administrators in conjunction with financial characteristics of consumers published by the Federal Reserve. [8] Also taken into account were the average time and demand deposits made by the College as well as the cash deposits of local businesses resulting from College-related transactions. (See section on Employee Expenditures for non-rental housing impact)

TABLE D
Factors Used in Determining Expansion of Local Credit Base

Average time deposit of College	\$ 541,000
Average demand deposit of College	165,000
Average time deposit of employees	4,896
Average demand deposit of employees	1,651

Expansion of local bank credit base from College-related deposits	7,121,243
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Unrealized Local Business Volume

The operation of College enterprises that compete directly with local businesses has a negative impact on the business sector. In FY 1981, the volume of auxiliary enterprise business at the College, including the bookstore and food services, was \$1,017,143. This figure, however, probably overstates the actual negative impact since it does not take into account the business activity that exists, solely because there is a College, such as the sale of textbooks.

Government Sector

Montgomery College contributes to the tax revenues of the County primarily through the income and real estate taxes paid by its employees. Employees also increase the amount of revenue transfers from the State and federal governments to the County. At the same time, the County spends tax monies to support the College, its employees and their families. In addition, the removal of College-owned property from the tax rolls decreases revenue from County property taxes.

College-Related Revenues

Montgomery County received about \$1.3 million from College-related taxes and transfers in FY 1981 (Table E). This does not include \$10.6 million in State aid for the College, \$5.4 million in State and federal student financial aid, or about \$100,000 in vocational education funds that came into the County through the College.

TABLE E
College-Related Revenues Received by Montgomery County

Real estate taxes paid by College employees	\$ 673,950	
College-related real estate taxes paid by businesses	54,571	
Real estate taxes paid by the College	14,644	
Non-real property tax paid by College employees	78,512	
Income tax paid by College employees	<u>294,039</u>	
Total taxes received by County		\$1,115,716
State & Federal aid allocable to employee households	147,376	
Federal Revenue Sharing allocable to employee households	<u>28,691</u>	
Total aid transfers		\$ 176,067
Total County Revenues		<u><u>\$1,291,783</u></u>

The \$673,950 in real estate taxes paid by College employees was based on the average assessed value of Montgomery County homes, according to County assessment figures. [5] The average tax per homeowner was computed by multiplying the 1981 tax rate times the average assessed value. This result was then multiplied by the number of resident employees who owned homes. (Homeownership was estimated from U.S. Census data.) [10] Real estate taxes (\$54,571) paid by businesses were based on the value of College-related business property multiplied by the current

ratio of assessed value to market value of taxable property, (46.8%). [5] The College also estimated that \$14,644 of monies paid by the College for the lease of rental property went for property taxes. Non-real property taxes paid by employees of \$78,512 were based on the non-real taxes paid by the average County household. [6] Local income tax payments of \$294,039 came from estimates made by the State comptroller from the percentage of total income spent on local income taxes. [3] Income tax figures are conservative because they take into account only earned income from the College.

Only two revenue transfers were described because they were based primarily on resident status instead of needs or other special formulas. The first transfer of \$147,376 reflects monies received by the County from the State and federal governments for children of College employees enrolled in public schools. The estimate of this revenue is based on the average amount of aid per child [4] multiplied times the estimated number of school children in resident employee households. [4,9] The second transfer payment of \$28,691 for federal revenue sharing was computed by multiplying the amount of revenue received per capita [6] times the total number of persons in resident employee households (1,919).

College-Related Costs

Along with the revenues received were costs the County incurred to support the College and its employees. The main costs included about \$1.3 million in municipal and school services, and almost \$170,000 in foregone real estate taxes. The County also held about \$3.8 million of school and other government property in support of services provided to College employees and their families (Table F).

TABLE F
College-Related Costs Borne by Montgomery County

Costs of municipal-type services	\$ 441,239
Costs of operating public schools	841,606
Total costs	<u>\$1,282,845.</u>
Foregone real estate taxes	\$ 168,342
Value of government property	3,779,041

Computation of the County's cost of providing municipal type services and public schools for employees and their families was based on average costs per household. [9,10] Similarly the amount of government property allocated to College employees was based on the value of all government property per local household as determined by the Maryland State Department of Assessments. [1] The method of estimating the value of real estate taxes that the County did not receive because of the tax-free status of College property causes a built-in understatement of the tax revenue. The average value of all County property per acre [6] was multiplied by the total amount of land occupied by the College's three campuses and the 1981 tax rate for a total of \$168,342. The difficulty of determining how the land might have been developed and the effect the College has had on surrounding development ruled out other methods of calculating foregone taxes for this study.

Job Sector

The greatest impact the College had on private individuals in the County was primarily through jobs and employment opportunities. The College directly employed over 980 people full-time in FY 1981 as administrators, faculty or support staff in its regular, Community Services, and auxiliary enterprises operations (Table G). Over 340 additional people were employed by local businesses and the County government to support these College employees and their families. The estimate of non-College jobs was computed by multiplying the number of full-time College jobs by an employment multiplier of 1.35 and subtracting the number of College jobs from the total number of jobs [13].

The multiplier was based on the size of the jurisdiction, the diversity of the economy, total business volume, and the size of local government operations. The College also employed over 470 people in part-time positions, which meant the College directly influenced income in approximately 1,800 households.

TABLE G
Number of Local Jobs Allocable to the Presence of the College

Total full-time College employees including	981
Community Services and auxiliary enterprises	
Local government and business jobs	343
Total full-time jobs	<hr/> 1,324
Number of part-time College employees	474

Discussion

The operation of Montgomery College increases the impact of expenditures of County tax dollars allocated to the College through the additional revenues the College receives from other sources. The College's operating revenues come from three primary sources: The County, the State of Maryland, and the students. Each contributed about a third of the cost of operating the instructional and community services programs of the College in FY 1981 (Table H). Every dollar the County taxpayers contributed in support of the College was matched by 95 cents in State and federal support, or stated as a ratio, .95 to 1. The ratio is the same for student tuition and fees to County contributions, .95 to 1. Total operating revenues to County contribution results in a ratio of 1.98 to 1, which means every County dollar was matched by almost \$2 in student and State revenues. These ratios do not take into account all State and federal student aid or vocational education funds. The expenditures of all these revenues resulted in the impacts found for the local business, government and job sectors.

TABLE H
Montgomery College Revenues by Source, FY 1981

<u>Source</u>	<u>Percentage</u>	<u>Amount</u>
Student tuition & fees	31.8%	\$ 10,592,427
County appropriation	33.5%	11,160,048
State aid	31.9%	10,623,712*
Other	2.8%	889,260
Total	100.0%	\$ 33,265,447

* Includes pension and social security payments for College employees, as well as the State appropriation for the College.

Business Sector

The total impact of College expenditures in Montgomery County, \$12 million, was slightly greater than the County appropriation of \$11.2 million to the College. The ratio of College impact to County appropriation was 1.07 to 1, or for every tax dollar the County spent for Montgomery College, about \$1.07 was returned to the business sector in the County. In addition, 37 cents of every dollar spent by the College for operations, including employee salaries and benefits, supplies, energy, etc., entered the County's business sector as payment for goods and services. Much of the economic impact of the College (83%) was generated by expenditures made by its employees. The high proportion of resident employees, 73 percent, was the major contributing factor. By living in Montgomery County, these employees made a significant contribution to the local economy and the jurisdiction which provided approximately a third of their salaries.

In FY 1981, the College spent about 18.6 percent of non-compensation monies in Montgomery County. This low percentage is probably due to the proximity of the two major retail regions of Baltimore and Washington and the use of bidding procedures.

The employees and the College also helped expand the local credit base by more than \$7.1 million through savings and checking accounts. This money in turn resulted in increased local investment and jobs.

The major negative impact the College had on the business community was the \$1 million of unrealized business volume that resulted from College operated enterprises. Since some of this activity, such as bookstore sales of textbooks, would not occur if the College did not exist, the negative impact is probably much less.

Government Sector

The cost to the County of providing municipal and public school services to the resident employees of the College and their families is comparable to the College-related revenues received by the County. The ratio of costs to benefits is .99 to 1, or for every 99 cents spent by the County for municipal services or public schools, \$1 was received as taxes or fund transfers (Tables E and F). The County, however, also owned about \$3.8 million in government and school property in support of these services. In addition, the County lost at least \$168,000 in foregone real estate taxes for tax-exempt property owned by the College.

If State aid for the operating costs of the College are included in College-related revenues received by the County, the ratio of costs for services to benefits becomes .11 to 1, instead of .99 to 1. Thus under this assumption, for every 11 cents provided by the County for services to the College employees, the County receives \$1 in revenue.

In addition, part of the student aid and tuition came from State and federal scholarships and grants. In FY 1981, the College received \$5.4 million in State and federal student financial aid and over \$96,000 to administer the Federal aid programs. The College also received over \$100,000 in Vocational Education funds. The comparison of County costs of providing College-related services and supporting Montgomery College to College-related revenues and State and federal aid to students and the College results in a ratio of .72 to 1 (Table I). Thus, for every 72 cents the County spends for providing College-related services and for supporting the College, the College returns \$1 in College-related revenues to the County.

TABLE I
Comparison of County Costs & College Related Revenues

<u>Costs</u>	<u>Revenues</u>
Provision of services \$ 1,282,845	Taxes & aid transfers \$ 1,291,784
Support of College 11,160,048	State support for College 10,623,712**
<u>Foregone property tax 168,342</u>	State & federal Student financial aid 5,522,848*
	Fed. vocational-education funds 104,745
TOTAL \$12,611,235	\$17,543,089

* Includes federal administration funds.

** Includes pension (\$1,703,000) and Social Security (\$909,000) for College employees, as well as the State appropriation for the College.

Job Sector

The employment of approximately 1,450 people in full or part-time positions makes Montgomery College a major County employer. The College's influence in the local job market is even more substantial when the 343 government and business jobs that exist in support of the College, its employees and their families are considered. Because the College is a labor intensive enterprise, reductions or increases, such as the addition of the Germantown campus, can affect the local job picture.

Future Impacts

Analyses also were made using FY 1982 and FY 1983 budget and compensation projections. The results assume no change in the local business volume, the County and school budget, the assessed value of local property, or the consumer characteristics of employees. Table J shows how changes in the Montgomery College budget can influence the local economy.

Table J
Comparisons of College Economic Impacts

	Fiscal Year		
	1981	1982*	1983*
Local expenditures by College	\$ 1,490,835	\$ 1,443,481	\$ 1,461,087
Local expenditures by employees	7,374,515	8,059,997	8,637,244
<hr/>			
Total local expenditures	\$ 8,865,350	\$ 9,503,478	\$10,098,331
Multiplier effect	x 1.35	x 1.35	x 1.35
<hr/>			
Total impact	\$11,968,223	\$12,829,695	\$13,632,747

Government Sector

Total taxes & transfers	\$ 1,291,784	\$ 1,354,562	\$ 1,408,930
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* Based only on College budget increases for these years with 1981 data for other variables.

From FY 1981 to FY 1983 the total impact of the College on the local economy will increase an estimated 13.9 percent. All of the increase is related to local expenditures by the College's employees, since most of the budget increase was designated for higher salaries. It should be noted, that estimates for increased faculty compensation were not included because faculty compensation was under negotiation with the faculty at the time of the study.

The revenues received by the County as taxes and transfer payments, not including State aid for the College, will increase 9.1 percent over the two years. The increase is a result of higher taxes paid by local faculty, staff and administrators. The use of 1981 County budget, tax, and assessment data in the formulas for FY 1982 and FY 1983 was the primary reason that the increase was less than expected. If a modest increase of five percent is assumed for County budget, tax, and assessment data for the two-year period, the increase in total taxes and revenue transfers from FY 1981 to FY 1983 is \$1.45 million, or 12.6 percent more than the revenues for FY 1981. If the increase in County budget, tax, and assessment data was changed to five percent per year, the increase in total taxes and revenue transfers would be \$1.5 million or 16.1 percent more in FY 1983 than the revenues for FY 1981. College-related costs to the County were not estimated since relevant data for FY 1983 were not collected.

Conclusion

Montgomery College was not designed primarily to create jobs, generate business or boost sales in the County. Many other institutions and businesses perform these functions much more efficiently. In carrying out its primary task--to provide high quality higher education to a diverse cross-section of County residents--the College has created new jobs and increased local business activity. The positive impact the College has had on the County's economy has come from both a better trained workforce and the operation of a multi-million dollar complex.

This study did not attempt to measure the value of the College's instructional programs to the worker and the County's economy. However, it has shown that the College, operating as one of the County's major enterprises, has had positive impacts on all sectors of the local economy. These positive impacts are in addition to those made by Montgomery College through its principal mission of increasing the quality of life, knowledge, and skills of its students and of the community it serves.

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The following factors were considered in determining the multiplier effects for Montgomery County:
1) geographic size, 2) size of work force, 3) diversity of local economy, 4) current growth, 5) industrial base, 6) unemployment and underemployment, 7) excess business capacity and 8) literature on multiplier effect.

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